

**REMARKS**

Independent Claims 63 and 80 are amended herein, as discussed further below. No new matter is added. No claims are added, canceled, nor is the dependency of any claim changed. Thus, after entry of this amendment, Claims 61-80 are pending in the application, including independent Claims 61, 63 and 80. Due to dependency, all claims other than Claims 61 and 62 are affected by the amendments made herein.

In the current Office Action, the Examiner rejected each claim as anticipated by, or unpatentable over, the Nakayama reference. In accord with an interview on November 7, 2002 between the undersigned and the Examiner, amendments are presented herein to explicitly recite that the term "animation," as used in the claims, refers to display techniques which cause at least part of the display to appear, to the human eye, to move in a continuous fashion ... that is, to give an illusion of motion. Also in accord with said interview, Nakayama is believed to be inapplicable to the claims, as presently amended, because Nakayama does not teach, describe, or fairly suggest such "animation."

**Affect of Amendments on Breadth of Claims**

No claims are narrowed by the amendments submitted herewith. Rather, the amendments clarify that the word "animation" is used in the claims according to its ordinary meaning as reflected in dictionary definitions, common usage, and as it is consistently used throughout the Applicant's specification. Because the amendments merely impose that meaning of "animation" which was already required by the context of the specification, they do not narrow the scope of the claims.

The word "animation," as it is commonly understood, and as it is used throughout the Applicant's specification, includes the meaning "creating the illusion of motion" that is added by the present amendments. "Animation" is defined as "The act, process, or result of animating." in definition 1 (The American Heritage Dictionary of the English Language, Houghton Mifflin 1979), which invokes "animate." "Animate" is defined, in turn, "To make, design, or produce (a cartoon, for example) so as to create the illusion of motion." (Id.) The "illusion of motion" language from this definition has been incorporated into Claims 63 and 80 because it agrees more closely with the dictionary definition, and because it is less ambiguous. Nakayama clearly fails to suggest, teach or disclose animation, in the sense of "giving the illusion of motion."

Allowable Claims

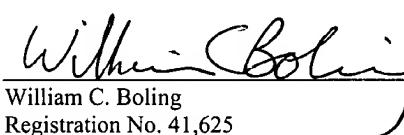
The Examiner agreed that Nakayama is not applicable to continuous-type animations. It is respectfully submitted that Nakayama is similarly inapplicable to "animation that gives the illusion of motion." Nakayama does not teach, disclose, or reasonably suggest animation that gives the illusion of motion, and as such cannot anticipate or render obvious any of the claims as presently amended, because each includes a limitation to animations that "simulate continuous transformations" (Claims 61 and 62), or to animating "so as to [produce/give] an illusion of motion" (Claims 63-80).

Each rejection of claims of the subject application heretofore set forth by the Examiner, including all of those in the current Office Action, relied upon Nakayama. As such, it is respectfully submitted that each outstanding rejection has been overcome. Barring the discovery of new grounds for rejection, the Applicant therefore respectfully requests early and favorable notification, for example by means of a Notice of Allowance and Issue Fee Due, of the allowability of each pending claim as presently amended. The undersigned further respectfully requests the Examiner to contact him in any convenient manner, such as by telephone, regarding any remaining issues that the Examiner feels may preclude such early allowance, and which might be resolved or expedited by such contact.

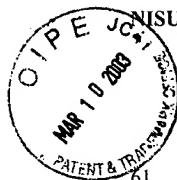
The Assistant Commissioner is authorized to construe this paper as including a petition to extend the period for response by the number of months necessary to make this paper timely filed. Fees or deficiencies required to cause the response to be complete and timely filed may be charged, and any overpayments should be credited, to our Deposit Account No. **50-0490**.

Respectfully submitted,

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## Marked-Up Version Showing Changes Made To Claims

61. (Unchanged) A method of presenting, on a computer controlled display device, transformation rules of abstract representations using animations to simulate continuous transformations.
62. (Unchanged) A method of teaching transformation rules for abstract symbolic statements using the method of Claim 61.
63. (Amended) A method of illustrating transformations of abstract symbol statements, comprising:
  - a) presenting a first form of an abstract symbol statement on a computer-controlled display device;
  - b) presenting a second form of the abstract symbol statement that is a transformation of the first form;
  - c) animating, so as to produce an illusion of motion, portions of the first form of the abstract symbol statement, while other portions of the first form remain static, to indicate conceptual changes involved in the transformation from the first form to the second form of the abstract symbol statement.
64. (Unchanged) The method of claim 63, further comprising:
  - d) calculating intermediate abstract representations between the first and second forms of the abstract symbol statement; and
  - e) animating changes between the first and second forms of the abstract symbol statement by displaying said intermediate representations sequentially on said display device to cause the transformation to appear continuous.
65. (Unchanged) The method of Claim 63 wherein the abstract statement is an equation.
66. (Unchanged) A method of teaching transformation rules for abstract symbolic statements using the method of Claim 63.
67. (Unchanged) The method of Claim 63, further comprising: (d) accepting user input; and (e) changing the computer-controlled display in response to the user input.
68. (Unchanged) A method of teaching transformation rules for abstract symbolic statements using the method of Claim 67.

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69. (Unchanged) The method of Claim 67, further comprising: (f) providing computer-controlled voice explanations synchronized with the animations of portions of the first form of the abstract symbol statement.

70. (Unchanged) A method of teaching transformation rules for abstract symbolic statements using the method of Claim 69.

71. (Unchanged) The method of Claim 69, further comprising (g) converting text to speech.

72. (Unchanged) The method of Claim 71, further comprising (h) controlling the synchronization of the voice and the animations of portions of the first form of the abstract symbol statement by means of a text script.

73. (Unchanged) A method of teaching transformation rules for abstract symbolic statements by using the method of Claim 72.

74. (Unchanged) The method of Claim 63 wherein the step (c) of animating portions of the first form of the abstract symbol statement includes one or more animation techniques selected from the group of animation techniques consisting of:

- i) moving a symbol along a prescribed path;
- ii) transforming a first symbol into a second symbol;
- iii) splitting a first symbol into multiple copies;
- iv) fading out a symbol;
- v) fading in a symbol;
- vi) adding pictorial additions to a symbol, and
- vii) removing a pictorial addition that was previously added to a symbol.

75. (Unchanged) A method of teaching transformation rules for abstract symbolic statements using the method of Claim 74.

76. The method of Claim 74, further comprising:

- d) accepting user input;
- e) changing the computer-controlled display in response to the user input; and

**Marked-Up Version Showing Changes Made To Claims**

- f) providing computer-controlled voice explanations synchronized with the animations.

77. (Unchanged) A method of teaching transformation rules for abstract symbolic statements using the method of Claim 76.

78. (Unchanged) The method of Claim 76, further comprising (g) evaluating context dependent content of the voice explanations.

79. (Unchanged) A method of teaching transformation rules for abstract symbolic statements using the method of Claim 78.

80. (Amended) A method of teaching transformation rules for abstract symbolic statements comprising:

- a) a step for displaying an abstract symbol statement in a first form;
- b) a step for displaying an abstract symbol statement in a second, transformed form; and
- c) a step for animating a transition between the first form and the second, transformed form of the abstract statement, so as to give an illusion of motion to at least a part of one of the abstract symbol statements.